

## REMARKS

Claims 47-59, 61, and 64-75 are pending in the application. Claims 60 and 62-63 are withdrawn.

### Election/Restriction

The Examiner stated "this application contains claims 60 and 62-63 drawn to an invention nonelected with traverse..." and further stated that a "complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01."

Applicants respectfully point out that the nonelected claims were withdrawn in response to a restriction to different species of the invention. Claims 60, 62 and 63 depend from claim 47, which is generic to the elected and nonelected species. Should claim 47 be found to be allowable, then the withdrawn claims may be rejoined under MPEP § 821.04(a). Applicants note that MPEP § 821.01, to which the Examiner refers, states:

Where a reply to a final action has otherwise placed the application in condition for allowance, the failure to cancel claims drawn to the nonelected invention(s) **not eligible for rejoinder** or to take appropriate action will be construed as authorization to cancel these claims by examiner's amendment and pass the application to issue after the expiration of the period for reply.

Since the claims corresponding the nonelected species may be eligible for rejoinder, Applicants respectfully submit that cancellation of the claims is not required.

### Claim Rejections Under 35 U.S.C. § 102

The Examiner asserted that claims 47-50, 54-56, 59, 64-75 are anticipated by Blankenbecler (U.S. Patent No. 5,044,737) 35 U.S.C. §102(b). The Examiner also rejected claims 47-50, 54-56, 59, 67-68 and 73 as anticipated by Blum (U.S. Patent 5,861,934) under 35 U.S.C. §102(b). The Examiner further rejected claims

47-50, 54-56, 59, 61, 64, 67-68, and 73 as anticipated by Foo (U.S. Patent 5,621,574) 35 U.S.C. §102(b).

Applicants respectfully disagree, at least in view of the amendment herein to independent claim 47.

For clarity, Applicants have amended claim 47 to recite that the claimed apparatus includes a vertically graded refractive index (vGRIN) film having a *vertically graded refractive index  $n(y)$ , where  $y$  is substantially perpendicular to the direction of propagation of the electromagnetic beam*. The multilayer structure further includes a curved input sidewall and a curved output sidewall, where the input sidewall is a sidewall on which an electromagnetic beam is incident on the apparatus, and the output sidewall is a sidewall through which the electromagnetic beam leaves the apparatus.

None of the references cited by the Examiner teaches each and every feature of amended claim 47.

The Examiner asserts that each of Blankenbecler, Blum and Foo teach “an axially graded refractive index multilayer structure.” The Examiner proceeds to equate such an axially graded multilayer structure with Applicants’ vGRIN film and asserts that “the term ‘vertically graded refractive index’ is known in the art as ‘axial graded refractive index’ which more accurately describes the gradient distribution since a horizontal graded index lens turning 90 degree would be a vertically graded refractive index.”

Applicants respectfully submit that the Examiner has mischaracterized Applicants’ apparatus. The amended claims unambiguously recite a vGRIN film having a *vertically graded refractive index  $n(y)$ , where  $y$  is substantially perpendicular to the direction of propagation of the electromagnetic beam*. As the Examiner has pointed out, the cited references teach axially graded refractive index multilayer structures where the refractive index varies along the optic axis. In contrast, the refractive index of Applicants’ multilayer structure varies as a function of  $y$ . The claimed multilayer structure is deposited on a substrate and further

includes a curved input sidewall and a curved output sidewall through which the electromagnetic beam enters and leaves the apparatus, respectively.

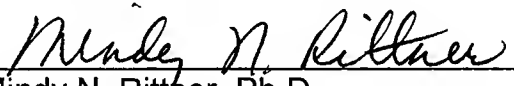
The Examiner has failed to find any references that teach or suggest an apparatus including each and every feature of the claim 47. Thus, the cited art cannot anticipate claim 47 or any claims depending therefrom.

Applicants therefore respectfully request that the Examiner withdraw the rejection of the claims under 35 U.S.C. §102(b) over Blankenbecler, Blum, and Foo.

### **Conclusion**

Applicants submit that this Response places pending claims 47-59, 61, and 64-75 in condition for allowance. The Examiner is invited to contact the undersigned agent for Applicants via telephone if such a discussion will expedite prosecution of this application.

Respectfully submitted,

  
Mindy N. Rittner, Ph.D.  
Registration No. 57,803  
Agent for Applicants

BRINKS HOFER GILSON & LIONE  
P.O. Box 10395  
Chicago, Illinois 60610  
(312) 321-4200